

NCPA *Downlink*

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Serving Amateur Radio Digital Communication in Northern California

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President's Message

Band Plan Changes

We've been busy this year--there have been some significant additions to the band plan. Check out the updated band plan in this issue. A copy also is on our web page.

In the six meter band, the sub-bands recognized by the ARRL and others as digital have been adopted by the NCPA. These are 50.60-50.80 MHZ and 51.62-51.86 MHZ. Specific uses for each channel have not been decided. If you have ideas or even current digital usage there, now is a good time to contact the NCPA board with ideas or suggestions. Since this band travels better over rough terrain and travels further, the intention is for most of these frequencies to be forwarding or backbone channels.

In the 1.25 meter band, the 219-220 digital segment now shows up in the digital band plan. The FCC specifies it as point-to-point high-speed digital. The difficulty with using this sub-band continues to be the requirement of getting permission from the existing AMTS stations. I have an idea about that and plan to work on it as soon as we're done with Pacificon. Also, the Gilroy BBS LAN ("Garlic") uses the upper end of the ARRL suggested weak-signal sub-band channel of 222.14 for LAN forwarding. This has gone on for a decade with not so much as even rumors of complaints, so the board voted to adopt that channel as digital.

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NCPA Board Meets on the Internet

The board of directors of the NCPA have been doing things a bit differently lately. Instead of face-to-face meetings, much of the association's business is now being conducted electronically on the Internet. An amendment to the NCPA Constitution provided for this new mode of operation, and NCPA members and interested amateurs are invited to participate in the discussions.

To subscribe to the NCPA Board mailing list, send an email message to "majordomo@ncpa.ampr.org". In the body of the message, include the text: "subscribe board". You will then automatically be sent copies of all the email that is being exchanged. To address the board (and any interested listeners, like yourself), simply send email to "board@ncpa.ampr.org", and everyone who has subscribed to the list will receive a copy of your comments.

For a more complete list of remailer commands, email to "majordomo@ncpa.ampr.org" and put "help" in the text. You will be emailed a complete list of commands and descriptions.

The Board feels this new way of holding meetings allows them to save time, react more quickly to situations as they develop, to increase member participation, and maybe even save some gas. We hope you will agree.

The President's Message

Continued from page 1

There hasn't been much movement on getting any sub-bands in the 70 cm band; however, 433.xx is looking more promising. The difficulty with the 70 cm band is that NARCC has made coordinations all over that band and keeps that information to themselves, thus making it very difficult to know what frequencies are "more available" than others. We recently went to a NARCC board meeting where some progress was made.

Meeting with NARCC & Start of SMC

The NCPA and NARCC met in July over the issue of digital frequencies allocations. The biggest development from that meeting was the start of a Spectrum Management Committee, SMC. This isn't a new idea, but what's different this time around is the agreement that all participants will have an equal vote and all amateur interests will have a seat. The SMC already has an internet remailer and it is expected that the vast majority of its activity will be done that way (via e-mail). This will make it easy for everyone to participate.

It was decided to have two representatives from each organization or interest on the SMC. Others may subscribe to the SMC remailer to observe and offer comments or recommendations, but only the committee members will have a vote. Currently, we still need representatives for weak-signal and ATV. There are already representatives for repeaters and digital. Until there is adequate representation from the various interests, the SMC won't be doing much of anything. At least until the SMC gets going and has a chance to establish guide lines, Tim KE6FSE (NARCC and CVDRA) and I, WB6YRU (NCPA) will co-chair the committee. The remailer address is smc@ncpa.ampr.org. To subscribe, send e-mail to majordomo@ncpa.ampr.org with "subscribe smc" in the message body (without the quotes of course), the subject doesn't matter.

Pacificon 97

The Pacificon 97 Amateur Radio Convention will be at the Concord Hilton on October 17, 18 and 19, 1997.

The NCPA will again have a table at Pacificon. This time we're going to try it in the Hertz room (that same side room that ATV and APRS has occupied in the past). Since we usually have equipment for demonstrations and that room can be locked, it provides better security during off hours. If you are interested in helping out, let me know (packet: wb6yru@n0ary.#nca.ca.usa.noam or e-mail: wb6yru@arasmith.com).

The NCPA is sponsoring two forum sessions: Packet Satellites and Packet Questions and Answers. Carol Byers W9HGI, sysop of the packet satellite gateway station for the Pacific region, gave the Packet Satellite talk last year and I understand she's got it more polished and updated for this year. We will again have the popular Packet Questions & Answers session too, so bring those questions and/or comments for that discussion. I hope to see you all there!

73, Gary WB6YRU

The NCPA Downlink

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Back issues of The NCPA Downlink, as well as other information about the NCPA, are available on the Web at:
<http://www.arasmith.com/~ncpa>

The NCPA Board of Directors meets electronically in order to transact association business and meet with members and interested amateurs. The address for the board mailing list is: board@ncpa.ampr.org. Email to majordomo@ncpa.ampr.org with the text "HELP" in the body of the message for details of how to subscribe to the discussions.

Lessons from Geese

The following "lesson" was read by the Chairman of the Board as the introduction at the NEDA Board of Directors' meeting on Jan 27, 1996.

FACT 1: As each goose flaps its wings, it creates an "uplift" for the birds that follow. By flying in a "V" formation, the whole flock adds 71% greater flying range than if each bird flew alone.

LESSON: People who share a common direction and sense of community can get where they are going quicker and easier because they are traveling in the thrust of one another.

FACT 2: When a goose falls out of formation, it suddenly feels the drag and resistance of flying alone. It quickly moves back into formation to take advantage of the lifting power of the bird immediately in front of it.

LESSON: If we have as much sense as a goose, we stay in formation with those headed where we want to go. We are willing to accept their help and give our help to others.

FACT 3: When the lead goose tires, it rotates back into the formation and another goose flies to the point position.

LESSON: It pays to take turns doing the hard tasks and sharing leadership. As with geese, people are interdependent on each other's skills, capabilities, and unique arrangements of gifts, talents, and resources.

FACT 4: The geese flying in formation honk to encourage those up front to keep up their speed.

LESSON: We need to make sure our honking is encouraging. In groups where there is encouragement, the production is much greater. The power of encouragement (to stand by one's heart and core values, and encourage the heart and core values of others) is the quality of honking we seek.

FACT 5: When a goose gets sick, wounded, or shot down, two geese drop out of formation and follow it down to help and protect it. They stay with it until it dies or is able to fly again. Then, they launch out with another formation to catch up with the flock.

LESSON: If we have as much sense as geese, we will stand by each other in difficult times as well as when we are strong.

(Transcribed from a speech given by Angeles Arrien at the 1991 Organizational Development Network and based on the work of Milton Olson.)

News from the ARRL

From The ARRL Letter, July 25, 1997

ARRL BOARD SUPPORTS HAM SPECTRUM PROTECTIONS, BAND PLANS, VE RULES CHANGES

The ARRL Board of Directors has resolved to support legislation that would provide statutory protections for ham radio frequencies. The action came as the Board met July 18 and 19 in Rocky Hill, Connecticut. In taking this action, the Board cited the potential threat to Amateur Radio bands from the federal policy of selling spectrum to the highest bidder.

In a separate action, the Board voted to seek primary Amateur Service allocations of 5650 to 5725 MHz and 5825 to 5850 MHz in the 5650 to 5925 MHz band that is now a secondary allocation.

Voluntary band plans would be referenced in the FCC's rules under another Board action. Noting the erosion in the level of compliance with the various band plans, the Board voted to petition the FCC to amend the amateur rules to state that hams "should be familiar with, and should abide by" voluntary band plans that apply to the frequencies they use.

In another action, the Board voted to volunteer the League's services as a special event call sign common data base coordinator. The Board approved a motion to submit a request in response to a recent FCC invitation. The request will "express the League's interest in serving as a special event call sign coordinator at no cost to the applicants." The League would cooperate with other groups or individuals the FCC might select to serve as coordinators. Among other things, the League would work with them to develop common guidelines to govern the reservation of special event call signs.

Under a new policy approved by the board, ARRL Volunteer Examiners will not administer exam elements for which they have received credit on the basis of a medical exemption. The Board also proposed changes in the FCC's Volunteer Examiner rules to require that applicants attempt an accommodated Morse code exam before seeking a medical exemption. The Board also wants the rules changed to ensure that medical information supporting an exemption is on

file before the application for exemption is forwarded to the FCC.

Noting that no clear consensus has emerged in the wake of suggestions to restructure the Amateur Radio licensing system, the Board voted to extend the period for member comments. At its January meeting, the Board had received a committee report that offered several suggestions to revamp the amateur licensing system. Until further notice, members may continue to direct comments on restructuring to their ARRL directors. The Board plans to revisit the issue at a later date.

In other action, the Board:

- approved a change in Field Day rules to add non-CW digital modes as a separate mode.
- called for the convening of an industry standards conference to explore adoption of common interconnection standards for Amateur Radio equipment. The Board said that adoption of common standards "would reduce the cost and complexity of Amateur radio stations."
- authorized President Rod Stafford, KB6ZV, to appoint an exploratory committee to determine the best way for the ARRL to pursue the development of endowment funds to maintain certain essential ARRL activities "despite budgetary pressures."
- directed the introduction of a program to coordinate a nationwide effort to enlist local volunteers from ARRL-affiliated and special service clubs "to introduce young people to technology through Amateur Radio and to potential careers in technology." In approving the resolution, the Board cited the increasing importance of technological literacy and President Clinton's call for greater volunteer efforts on behalf of youth.
- approved the addition of a system of technical awards to recognize achievement in technical service, innovation, and microwave development.

- voted to have the Volunteer Resources Committee review the duties and responsibilities of the State Government Liaison and consider renaming the position.

FCC OKAYS COMMERCIAL HF MESSAGING SYSTEM

Over objections from the ARRL and several other parties, the FCC has given a conditional go-ahead to Flash Comm Inc to build and operate a nationwide, commercial, two-way short-data messaging system on HF. The grant, under Part 90 of the FCC regulations, would be on a secondary basis. The frequencies Flash Comm intends to use do not fall in any current ham bands. The League strenuously objected to the plan, however. The ARRL's primary objection stemmed from the fact that some of the frequencies Flash Comm plans to use fall within potential HF band expansions at 30, 20 and 17 meters and close to a potential new ham band at or near 5 MHz. The League said that it would drop its objections to Flash Comm's petition if the frequencies now under consideration for expanded ham allocations were dropped.

All of those who commented on the petition opposed it, fearing unacceptable interference in the HF spectrum. However, the FCC's Wireless Telecommunications Bureau said Flash Comm presented "a compelling case" that the new service "will be a unique and cost-effective way to monitor public and private property and infrastructure." Under the Flash Comm system, so-called "intelligent transceiver units" would be installed on vehicles as well as on structures. Transmitted data would enable the service to track the location or monitor the status of the "asset." Transmissions would be in short bursts averaging two seconds on unoccupied HF channels the Flash Comm system would select automatically. Radiated power would not exceed 1 W, although individual transmitter outputs could be as high as 15 W. The Commission said authorizing the system would provide valuable data for the FCC to evaluate plans to establish permanent rules for these sorts of operations.

The authorization, which involved some rules waivers, is for five years. Flash Comm has petitioned the FCC to establish rules to provide regular authorization of this type of service.

PRIVACY BILL COULD AFFECT SCANNER CERTIFICATION

A bill introduced by Rep Edward Markey of Massachusetts that's intended to add privacy protections for consumers using the nation's communication networks has caught the attention of scanner enthusiasts and some amateurs.

One clause in the bill--HR 1964, the Communications Privacy and Consumer Empowerment Act--would expand electronic privacy provisions in the Communications Act from the cellular telephone service to all Commercial Mobile Radio Services (CMRS). It would do this by prohibiting FCC certification of devices capable of receiving these frequencies. The CMRS is a relative new umbrella designation of subscriber based radio services that act like telephone services. Such services include commercial paging services, commercial air-to-ground services, cellular

telephone, offshore radiotelephone, personal communication services and specialized mobile radio services. The bill includes digital transmissions in those services.

While the apparent purpose of the change is to ensure the privacy of "telephone" conversations, scanner enthusiasts fear that a worst-case outcome could be to inhibit, if not block completely, the further certification of scanning radios. This could include ham transceivers with out-of-band receiving capability. Such radios must receive FCC certification to be sold legally. Designing cost-effective devices to filter the proscribed frequencies could prove difficult for manufacturers.

This week, the ARRL with met with Congressman Markey's staff in Washington to express Amateur Radio concerns about HR 1964. We presented information demonstrating what frequencies would be affected and the impact the bill could have on Amateur Radio public service activities.

"We learned several things," said Steve Mansfield, the League's Legislative and Public Affairs Manager. "First,

our suspicions were confirmed that, as a Democratic bill referred to the Republican controlled Commerce Committee, the bill has very little chance of passage in its present form."

Mansfield said the League contingent also found out that members of Congress do pay attention. "We explained that, in addressing privacy concerns, the bill casts too wide a net and could hurt Amateur Radio interests," he said. "Rep Markey's staff listened attentively to our concerns and invited us to help them craft language to address the problems we outlined, which we are doing." Since provisions within the bill could still be picked up and put in other bills in this or subsequent sessions of Congress, we felt the bill still required changes.

According to Colin Crowell, Markey's Legislative Assistant for telecommunication issues, the provision in question was intended to provide some privacy protections for fee-based "telephone" type services (especially the new PCS service) between now and the time that providers are able to develop robust digital and encryption technologies to ensure privacy

Steve Mansfield, N1MZA

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Where to Find DXPSN

Location	Call	Alias	Frequency	Coverage
California City	K6ZZ		144.490	Antelope Valley area
	K6ZZ	EARN8	144.490	Oak Peak
Castro Valley	W6RGG	DXCV	145.770	East, West, South SF Bay area
Chico	K6EL	DXC	145.670	Chico
	K6EL	DXW	145.670	Oroville, Red Bluff
	K6EL	DX	144.950	South Fork Mtn - Redding area
Hanford	K6UR	DXFRES	144.950	Bear Mtn, Fresno area
	K6UR	DX7	145.770	Mt. Adelaide, Bakersfield area
	K6UR	DX16	145.770	Oakhurst
Livermore	NF6S	DXL	145.770	Tri-Valley
Los Gatos	N6ST	DXLG	146.595	Santa Cruz Mtns, Monterey Bay
	N6ST	DXF	146.595	Santa Cruz/Los Gatos
Mill Valley	WA6CTA	DXCTA	1299.890	Napa/Benicia/Vallejo/Marin
	WA6CTA	DXFMT	1299.890	San Jose - So. SF Bay
Mountain View	K6LLK	DXMV	144.950	Mtn View, Ntwk Node and Hub
Oakdale	K6OQ		146.580	Modesto area
Penngrove	K6ANP	DXANP	144.950	Sonoma County
Pittsburg	AH0U	DXPB	146.580	Walnut Creek area
	AH0U	DX4	146.580	Sugarloaf Mt. - Napa valley
Reno, Nevada	N7TR	RENODX	144.950, 146.58, 441.500 (2400 baud), 51.7	Low Level in Reno
	N7TR	PCDX1	146.580	Virginia City, NV
	N7TR	PCDX	144.950	
	N7TR	DX2400	441.500 (2400 baud)	
Rio Linda	W6GO	DXRL	144.950	
San Francisco	W6OTC	DXSF	145.670	Sacramento, Woodland, Davis
				East Bay and North

Note: K6OZL is now K6UR

Northern California Packet Band Plan

50 MHz

50.60 to 50.80	20kHz channels (presently un-assigned)
51.12	SCA backbone
51.14	BBS
51.16	Keyboard to Keyboard
51.18	Experimental
51.62 to 51.68	20kHz channels (presently un-assigned)

144 MHz

144.31	BBS ¹
144.33	Balloon & experimental
144.35	Keyboard to Keyboard
144.37	BBS LAN Forwarding
144.39	APRS
144.41	duplex w/145.61
144.91	Keyboard to Keyboard
144.93	BBS ²
144.95	DX Cluster
144.97	BBS
144.99	BBS
145.01	APRS
145.03	Keyboard to Keyboard
145.05	Keyboard to Keyboard
145.07	BBS
145.09	BBS
145.61	duplex w/144.41 ³
145.63	BBS
145.65	TCP/IP 9600 bps
145.67	DX Cluster
145.69	BBS
145.71	9600 bps
145.73	BBS
145.75	TCP/IP
145.77	DX Cluster
145.79	BBS
146.58	DX Cluster

¹The allocations from 144.31 through 144.43 are tentative for now. Please be sure you are not over-deviating on these frequencies since they are relatively close to the weak-signal sub-band.

²Some TCP/IP in Sacramento grandfathered

³BBS forwarding in Monterey Bay area on minimal interference basis.

220 MHz

219.05 to 219.95	100kHz channels (presently un-assigned) ²
223.54	Node uplink (East Bay)
223.56	Node uplink (West Bay)
223.58	Node uplink ("Garlic") ¹
223.60	Node uplink (Sacramento Valley)
223.62	Node uplink (South Bay)
223.64	TCP/IP
223.66	Keyboard to Keyboard
223.68	BBS
223.70	Node uplink (Monterey Bay & N. Coast)
223.72	Node uplink (North Bay)
223.74	DX Backbone

¹TCP/IP interlink (Sacramento) Not to interfere with node uplink.

²By coordination only. (All coordinations currently on hold pending resolution of regulatory issues.)

440 MHz

441.50 Any

More 440MHz packet channels are currently being investigated, contact NCPA for details.

900 MHz

903.500	1 Mhz wide - TCP/IP
904.500	1 Mhz wide - TCP/IP
915.500	1 Mhz wide - Experimental
916.100	200 Khz Wide - Experimental
916.300	200 Khz Wide - Experimental
916.500	200 Khz Wide - Experimental
916.650	100 Khz Wide - Experimental
916.750	100 Khz Wide - Experimental
916.810	20 Khz Wide - Experimental
916.830	20 Khz Wide - Experimental
916.850	20 Khz Wide - Experimental
916.870	20 Khz Wide - Experimental
916.890	20 Khz Wide - Experimental
916.910	20 Khz Wide - Experimental
916.930	20 Khz Wide - Experimental
916.950	20 Khz Wide - Experimental
916.970	20 Khz Wide - Experimental
916.990	20 Khz Wide - LAN links (Contra Costa County only)

900 MHz activity is on a non-interference basis to vehicle locator service. 900 MHz is not considered suitable for omnidirectional systems, use for point-to-point links only.

1296 MHz

1248.500	1 Mhz wide - Experimental ¹
1249.000 to 1249.450	Unchannelized - Experimental
1249.500	100 Khz wide - Experimental
1249.600	100 Khz wide - Experimental
1249.700	100 Khz wide - Experimental ¹
1249.800	100 Khz wide - Experimental ¹
1249.870	20 Khz wide - Experimental
1249.890	20 Khz wide - DX Packet Cluster
1249.910	20 Khz wide - Experimental ¹
1249.930	20 Khz wide - Experimental ¹
1249.950	20 Khz wide - Experimental ¹
1249.970	20 Khz wide - Experimental ¹
1249.990	20 Khz wide - Experimental ¹
1250.500	1 Mhz wide - Experimental
1251.500	1 Mhz wide - Experimental
1297.000 to 1298.000	Unchannelized - Experimental
1298.500	1 Mhz wide - Experimental ¹
1299.000 to 1299.450	Unchannelized - Experimental
1299.500	100 Khz wide - Experimental
1299.600	100 Khz wide - Experimental
1299.700	100 Khz wide - Experimental ¹
1299.800	100 Khz wide - Experimental ¹
1299.870	20 Khz wide - Experimental
1299.890	20 Khz wide - DX Packet Cluster
1299.910	20 Khz wide - Experimental ¹
1299.930	20 Khz wide - Experimental ¹
1299.950	20 Khz wide - Experimental ¹
1299.970	20 Khz wide - Experimental ¹

Northern California Packet Band Plan

Continued from previous page

1299.990 20 Khz wide - Experimental¹

¹Full-duplex channel pairs: 1248 <-> 1298 and 1249 <-> 1299, eg: 1249.910 <-> 1299.910

Definitions

Experimental — Anything goes except full service BBS or any 24 Hr/Day services (nodes, gateways, etc). This is where you can come and test new gear, programs, etc. These channels may be reassigned in the near future so no permanent activities please.

Backbone, Uplink, Interlink — No uncoordinated stations. These channels are for specific purposes as defined by the NCPA and affiliated groups. This is where the various BBS, nodes, and clusters interlink and are very high usage channels. Please use the normal 2 meter entry points of the network you want to access rather than these channels.

Keyboard to Keyboard — Anything but full service BBS, TCP/IP, or DX Cluster. Primarily chat channels. These are also the primary emergency channels.

BBS — These frequencies are for user access to a full-service BBS. Keyboard-to-keyboard is tolerated. Please don't put high level nodes or digipeaters on these channels since they are local. A low-level direct link or node that links into a backbone on another frequency is the proper implementation.

LAN — Local Area Network. BBSs are grouped in LANs for more efficient forwarding. A LAN frequency is the forwarding channel within a LAN. Please do not attempt to access the BBS network on these channels unless you are coordinated with PSNC.

Personal Mailbox/Maildrop — A BBS-like system, often running entirely within a TNC, with a small number of users that handles information of a personal, local, or special-purpose nature. A mailbox is allowed on keyboard-to-keyboard channels only if it does not forward with other BBSs (personal or otherwise). Mailboxes may forward with full-service BBSs on LAN channels at the discretion of the BBS's SYSOP.

TCP/IP — Stations using TCP/IP protocol on top of AX.25. Some AX.25 tolerated to communicate to TCP/IP stations if a compatible p-persistence access method is used.

DX Cluster — Northern California DX spotting network. No other activity should be on these channels.

9600 Bps — Stations using 9600 Bps with direct FSK (G3RUH, TAPR, etc.) modems.

Procedure for changes

Users should contact either the frequency coordinator or the NCPA board. The frequency coordinator will then present the requests to the board at the next meeting along with suggested assignments. The NCPA board elected by you, the packet user, makes all assignments!

Note: NCPA currently does not coordinate individual stations, nodes, etc., leaving that to the special interest groups. BBS station coordination is done by the PSNC in Northern CA and by CENCA in Central CA. Coordinations of an alternate BBS type network including keyboard and TCP/IP in the central valley is done by CVDRA. DX Spotting is coordinated by DXPSN. Some digital is coordinated on auxiliary channels by NARCC.

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Where to Find a BBS

N0ARY-1	Sunnyvale	144.93, 433.37
KE6BX	Hollister	144.93
N6VZT	Brentwood	144.93
KJ6FY-1	Benicia	144.93
AC6NY	San Ramon	144.97
WD6CMU	Richmond	144.97
N6EEG	Berkeley	144.97
N6LDL	Los Gatos	144.97, 145.71 ¹ , 441.50
KD6JZZ-2	Sonoma	144.97, 223.54
WA6EWV-1	S. Lake Tahoe	144.97
KA6FUB	Martinez	144.99, 441.50
KO6LX	Gilroy	144.99
KE6LW-1	Yuba City	144.99, 441.50
W6PW-3	San Francisco	144.99
W6SF	Stockton	144.99
N6IU-1	Palo Alto	145.07, 223.56
KM6PX-1	Citrus Heights	145.07, 441.50
KC6PJW	Rohnert Park	145.07, 441.50
WA6NWE-1	North Highlands	145.09, 441.50, 144.93 ²
WA6YHJ-1	Livermore	145.09
KK6WD	Redding	145.09
KB6AML	Concord	145.09, 441.50
KB5IC	Almaden	145.63
KE6LW-1	Yuba City	145.63
WA6HAM	Pittsburg	145.69
KA6EYH-2	Daly City	145.69, 441.50
KO6RI-1	Sacramento	145.71 ¹
KA6JLT-2	Menlo Park	145.73, 145.71 ¹ , 441.50
AA6QR	Orinda	145.73
KB6MER-1	San Jose	145.73
KA6EYH-2	Pacifica	145.75 ²
W6YX-9	Stanford U.	145.75 ² , 433.43 ¹
WH6IO	Benicia	145.75 ² , 433.43 ¹
K7WWA	Willits	145.79
W6CUS-1	Richmond	145.79
N6QMY-1	Fremont	145.79

¹9600 baud port

²TCP/IP port

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CONSTITUTION OF THE NORTHERN CALIFORNIA PACKET ASSOCIATION

This document shall serve as the CONSTITUTION and BYLAWS of the Northern California Packet Association, and may be referred to as either.

ARTICLE I Purpose

The Northern California Packet Association is an educational, research, and public service organization. The purpose of the Association is to foster the development of digital Amateur Radio communications in Northern California. This field is occupied foremost by individual Amateurs who, individually and in groups, make efforts to research, design, test, construct, operate, and use digital systems. These individuals and groups also make efforts to recruit and educate others in the field. All of these efforts can benefit from planning and coordination, and it is the purpose of the Association to provide the forum for such to take place. To achieve these goals the Association is organized to function as a working group, rather than as a social organization, and it shall, among other things, strive to do the following:

1. Improve the state of the art in the field of digital communications via Amateur Radio.
2. Encourage and educate interested persons and groups in the area of digital communications via Amateur Radio.
3. Encourage the construction, operation, and expansion of local, regional, national, and worldwide communications systems using digital methods via Amateur Radio.
4. Encourage the development of new and diverse methods of digital communications.
5. Bring together a cross-section of all the diverse interests in the field of Amateur Radio digital communications so all will have a voice and the opportunity to offer their knowledge, experience, talents, and goals to the benefit of the digital community.
6. Select frequencies for digital use, working with users and coordination groups for non-digital modes, with an aim to maximize the ability of the Amateur Radio Service to accomplish its purposes as set out in Federal Regulations.
7. Coordinate use of digital frequencies so that the goals of the digital community are best facilitated.
8. Represent the interests of the Northern California digital community in its contacts with others, such as regulatory bodies, coordination groups for non-digital modes, and digital coordination groups serving other geographical areas.
9. Perform all these activities in Northern California, plus in any contiguous areas if the digital users in those areas and the Association should so decide.

ARTICLE II Members

A. Any individual or bona fide Amateur Radio club interested in the coordination of digital communications may become a Member upon making application and paying the dues. Memberships run from the time of joining until the same date the following year. Memberships automatically expire unless renewal dues are submitted. Membership may be denied or revoked for cause. "Cause" is

defined as conduct by the Member inimical to the Association's interest, and shall include, among other things, the inability to work with others in carrying out the Association's purposes.

B. Each bona fide Amateur Radio club which joins the Association shall designate a person to act as their representative. A club may also designate an alternate to serve if its representative is absent. Such designations shall become effective when the Secretary is notified of them by the club, and they shall remain in effect until he is notified otherwise.

C. Each individual Member and each representative (or alternate) of each club which is a Member shall have one vote at General Meetings of the Association.

D. All records of the Association shall be open to the inspection of any Member, and any Member shall have the right to timely copies of such records at cost and in any reasonable format requested. Only information in the nature of access codes may be withheld from such a request.

E. Lists of names of Members, as well as other information provided by the Association from its records, shall be used only for internal matters concerning the Association or the digital community it serves. Such lists shall not be used for solicitation, by other associations, for publication, or for commercial purposes of any kind. The Board may in writing waive these restrictions in circumstances where they deem it appropriate.

F. *Members Amateur radio operators* may band together to form Special Interest Groups in cases where they share an interest in a specific aspect of digital communications. They may select individuals to represent their group before the Board and thereby achieve greater participation in the Association's activities. Such representatives shall not become voting members of the Board because of that status, but the Board shall make an effort to obtain and weigh their opinion before making decisions concerning the interests of the group.

ARTICLE III Board of Directors

A. The Association shall be run by a **Board of Directors** (Board) which shall each year originally consist of seven individuals elected at the April General Meeting to serve for one year beginning May 1. The Board may at any time elect additional individuals to the Board in order to achieve a Board reflecting the diversity of interests in the digital community; however the maximum size of the Board shall be eleven members. These additional Board members shall, upon their election, have equal standing with the electing members and they shall have terms of office to expire at the same time as those of the electing Board. Each Board member must be an individual Member of the Association.

B. The Board shall manage the Association, and it shall perform other duties attributed to it by custom or law.

C. Board meetings shall be held in Northern California unless all Board members agree otherwise. Board meetings may be called by any three Board members. To have a Board meeting, each Board member must have been notified of it or have waived the right to notice. Notice may be put in the mail, sent digitally, or phoned to each Board member at least

4 days before the meeting, or publication in the newsletter will suffice. Half of the Board members constitute a quorum to do business.

D. *The Board may elect to meet electronically (E.G. internet remailer) so long as all Directors and Officers have approximately equal access. Such meetings may occur often and deal with single issues as they come up. As far as is practical, every effort must be made to make such meetings as open and accessible as face-to-face meetings.*

E. A majority of those voting on any matter is required for it to pass. Exception: An affirmative vote of two-thirds of the Board members is required to remove a Board member from that body or revoke a membership in the Association.

ARTICLE IV Officers

A. Officers shall be appointed by the Board. Officers need not be Members of the Association, nor must they be members of the Board. The Officers shall carry out the day-to-day management of the affairs of the Association in accordance with direction given them by the Board.

B. The Association shall have five Officers with duties as follows:

1. The **President** shall run Association meetings. His primary function is to coordinate. He shall strive to get other people to do as much as possible and thus increase involvement by others.

2. The **Vice President** shall assist the President, and shall perform the President's work if the President is absent.

3. The **Secretary** shall keep the Association's records, except financial and property records. He shall keep minutes of meetings and issue Association correspondence.

4. The **Treasurer** shall handle the Association's money. He shall make reports on the Association's financial condition as needed. He shall keep an inventory of any materials owned by, or on loan to the Association.

5. The **Newsletter Editor** shall produce the Association's newsletter. The newsletter shall be sent to all Members of the Association, all Board members, all Officers, and all Appointees. It may be sent to others at the Editor's discretion. All notices of General Meetings and minutes of all General and Board Meetings shall be published in the newsletter. Newsletters giving notice of a General Meeting must be placed in the mail thirty days before the Meeting.

C. In addition to the duties specifically listed, each Officer shall have the duties attributed to his office by custom or law.

D. The Board may designate individuals or committees to assist in specific duties (**Appointees**). Technical committees, frequency coordinators, and the like are examples. The Board shall specify the extent of the authority of such Appointees in the motion appointing them.

E. Officers and Appointees serve at the pleasure of the Board, and the Board may remove such persons from their positions and/or redefine their authority at any time. The term of office of Officers and Appointees terminates on April 30 of each year.

ARTICLE V General Meetings

A. A GENERAL MEETING shall be held, as far as practical, every April. Additional General Meetings may be held

during the year upon being called by the Board, or upon petition of the members per paragraph C of this article. General Meetings shall always be in Northern California. General Meetings shall be held only on Saturdays or Sundays, with a starting time no earlier than 10 a.m. The purpose of General Meetings is to provide a line of communications between the Board and Officers on one hand and the Members and members of the public on the other.

B. The final power in the Association rests with its Members; a vote by the Members prevails over a vote by the Board if they conflict. Any Member may bring any action up for a vote, but only if notice of the topic to be voted on has been published in the newsletter. The Editor shall include any notices of this type submitted to him by a Member.

C. Any fifteen Members may submit to the Secretary a petition calling a General Meeting. The petition shall state the date (at least 33 days hence), time, place, and topics to be discussed. The petitioners shall then within three days place a copy of the petition in the mail to all usual recipients of the newsletter. If the Secretary's office is vacant or he cannot be located in Northern California, delivery of the petition to another Officer or a Board Member shall suffice.

D. Items of business may be brought before a General Meeting by the Board of Directors without prior notice in the newsletter, but such notice is always required for actions at a General Meeting to amend this Constitution, to remove a Board member, or to revoke a membership in the Association.

E. Fifteen percent of the Members, but at least ten in number, must be present at a General Meeting to constitute a quorum, and a majority of those voting on a measure is required for it to pass. Exception: Two-thirds of those voting is needed to amend this Constitution, remove a Board member, or revoke a membership in the Association.

ARTICLE VI Required Notice

If action to remove a Board member or revoke a membership in the Association is to occur, written notice must be put in the mail to the affected party at least 15 days beforehand, so that he can have his say at the General or Board Meeting where the vote is to be taken. Temporary actions of this type may be taken without notice in an emergency, but no final action may be taken without it.

ARTICLE VII Amendments

Amendments may be made to this Constitution only by the Members (not by the Board of Directors). Proposed Amendments shall be set out in full in the newsletter preceding the General Meeting at which the vote is to be taken. The newsletter shall be put in the mail by first class mail to all Members at least thirty days before such meeting.

ARTICLE VIII Implementation

This Constitution shall become effective on an interim basis, until the next General Meeting, when approved by the Board. It shall be submitted to the membership for approval at the next General Meeting, and it shall become effective upon their approval.

As ammended and approved, May 10, 1997

NCPA Board of Directors Electronic Meetings

NCPA Board remailer activity summary, late May through late September 1997. Compiled by Gary WB6YRU (full text of traffic is available).

May 24, 1997

The following came from bulletin FREQS@AMSAT from KT0H

MIR Simplex:

Uplink 145.200 FM
Downlink 145.800 FM

SAREX Simplex (Space Shuttle):

Uplink 144.910, 144.93, 144.95,
144.97 or 144.99 FM

WB6YRU: Many of these are packet frequencies. I wonder why they aren't using 144.45, 144.47, and 144.49, which are supposed to be for space station links.

Discussion about when to start using 144.3 sub-band. Consensus is to start now and see if any problems come out of the woodwork.

May 25, 1997

KO6RI reports: activity will start soon on the duplex pair 144.41/145.61. This will be a 9600 baud network link between the wh6io BBS and the ko6ri BBS moving both BBS and tcp/ip traffic.

Larry WB9LOZ reports a slow decline in BBS packet. Some agree. Mike WA6ZTY reports no significant decline. Discussion on how packet might be made more interesting, especially with the internet gaining popularity. Consensus is faster links, better backbone, and more services (or combining services) including TCP/IP and links to internet. Central Valley Digital Radio Assn. already combines TCP/IP, keyboard, and BBS type operation.

Tim KE6FSE says CVDRA is concerned about NCPA allocating 438.xx before existing services there are investigated. Also they don't want NARCC and NCPA fighting over specific frequencies. Tim points out AX.25 is not an efficient protocol and better protocols can be used now that Part 97 no longer requires the use of AX.25.

CVDRA folks have mentioned a problem with allowing duplex on 145.65 and 145.61. They are investigating and will get back with a consensus.

WB6YRU: Message was sent to NARCC June 22 about the NCPA investigating 433.xx and 438.xx. No reply, but a notice was received about NARCC having a board meeting July 26 in Concord and this is on the agenda.

Discussion about using 6 meters, mostly for forwarding.

July 2, 1997

Mick, KO6LX resigns as director for personal reasons.

WB6YRU: Don W6NKF (NARCC) says Steve Stohrer, N6JXL is the 70 cm coordination chairman; Bob N6FRI is an advisor to the fre-

quency coordination committee, but still has control over the 70 cm coordination database.

There was some talk about the possibility of CVDRA and PSNC merging or at least consolidating several packet interests. Tim indicates CVDRA is not likely to merge with PSNC because of a difference in philosophies and operation, plus CVDRA extends into CENCA.

July 6 1997

WB6YRU: I have looked into the NCPA adding widely recognized digital six meter sub-band.

I propose that we adopt the ARRL six meter band plan for digital and begin allocating 50.6-.8 and 51.6-.7 MHz. Much of it would be for links and long-haul forwarding, (to be determined later).

July 7 1997

WB6YRU: NARCC evidently recognizes 222.14 MHz as digital. The GARLIC BBS LAN has used 222.14 for LAN forwarding for many years.

Propose that we adopt it as digital and include it in the NCPA band plan as a forwarding or LAN channel.

Furthermore, since 219-220 MHz is point-to-point digital, I propose we adopt this sub-band as point-to-point digital high-speed forwarding channels (100 kHz preferred).

KO6RI: reports the ARRL suggested band plan is available on the ARRL web site and includes six meter allocations: <http://www.arrl.org/field/regulations/bandplan.html>. He points out the ARRL six meter band plan includes digital repeaters and suggests NCPA think about coordinating. He also points out that some of ARRL's 70 cm digital allocations fall within ATV spectrum. NARCC has very little in the way of allocations, what there is can be seen in their Policy and Procedure doc's at: <http://www.ccnets.com/~rwilkins/policy.html#BANDPLAN>

N6HM indicates a need for keyboard channels in 70 cm.

KO6RI suggests we claim certain 70 cm frequencies (already considered digital by ARRL, so no new repeaters show up. And we need to get along with those that have repeaters there now. But if we can do some trading and get some clear frequencies things would be much better.

Discussion of digital allocations in the six meter band and the amount of usage there is now and possibly in the future. Looks like a good band for forwarding over difficult paths.

KI6AG reports the following six meter activity:

51.120 @ 4800 bps, Big Bear Lake backbone to So. Calif.
51.120 @ 4800 bps, Kingman, AR backbone
51.620 @ 9600 bps, So. Nevada backbone (Las Vegas to So. Cal)
51.140 @ 1200 bps EBAY forwarding channel (Orinda?)

51.160 @ 1200 bps, DXPN node near Chico (backbone)

KO6RI: the current six meter band plan isn't usable for building backbones.

WD6CMU: recommend putting the expanded bandplan forward as a proposal, subject to discussion with and agreement by NARCC and any other interested parties.

KE6FSE: About NCPA getting involved in coordination... If NCPA is not interested in establishing proper guidelines and policies to accommodate individual station coordination, then that leaves NARCC to do it.

KO6RI: If we knew who was coordinated on what frequencies then there wouldn't be a problem. NARCC doesn't know or won't say, which means the same thing to me.

July 10, 1997

WB6YRU: summary of our intentions to add certain 6 and 1.25 meter frequencies to the digital band plan were sent to NARCC for comment:

1.25 meters	219-220 and 222.14
6 meters	50.6-50.8, 51.6-51.8

Discussion about digital coordination.

WD6CMU: Under the NCPA, CVDRA would coordinate its own stations just as the PSNC coordinates BBS's. There is no agreement with NARCC on the subject, nor is one necessary--NARCC coordinates such stations as if they were any other link or control channel. Since NARCC absolutely refuses to share any information they have about current inhabitants of the band (outside of repeater ins/outs) with any other organization, it would be impossible for NCPA to assign a frequency with any assurance it would not cause interference. NARCC membership has twice voted down bandplan proposals their own 440 coordinator recommended for expansion of the current 70cm packet allocations (less than 0.07% of the band). Officially, NCPA has not given sanction to any other method of obtaining channels in the hope that negotiations would eventually yield a cooperative plan. But this has gone on for over a decade with zero results, so I can't see any justification for continuation of this policy.

July 18, 1997

KA6EYH wants to turn over job of frequency coordinator to WB6YRU. There were no objections.

July 29, 1997

Results of July meeting with NARCC: At the NARCC board meeting there were no objections to NCPA's proposed adoption of digital frequencies in the six meter and 1.25 meter bands. NARCC says they will provide information on coordinations within 433.xx and 438.xx, and their digital coordinations. There were no objections to 433.xx but 438.xx has some coordinations and needs more work.

NARCC and NCPA propose the formation of a Spectrum Management Committee (SMC).

Two representatives per group. This is probably the most important development out of that meeting. This came from the fact that the NCPA is in the process of selecting sub-bands for digital in the 70 cm band and NARCC has coordinations all over that band and their members voted to not divulge any coordination information. The SMC will be made of representatives from various amateur radio interests each with equal voice and vote. It looks like the SMC will operate over at least the top 2/3 of the state. Gary WB6YRU (NCPA) and Tim KE6FSE (NARCC & CVDRA) will co-chair the SMC at least until it gets going.

Aug 8, 1997

Adding sub-bands to the band plan

WB6YRU revises previous proposal to: add 50.6-50.8 MHz, 51.6-51.7 MHz, and 219-220 MHz to the band plan. 222.14 should be put on hold for now pending more information from weak signal. 70 cm is still under investigation; suggested 433.x and 438.x are also on hold pending more information from NARCC.

Seven YES, one NO. The proposal passes.

Aug 9 1997

222.14 is listed as weak signal in the ARRL suggested band plan, but it has been used for packet forwarding for many years around here. Propose we adopt it as digital...

- 1) specify it as regular digital
- 2) weak-signal digital,
- 3) neither one--leave it off the band plan.

Five votes 1) Specify it as regular digital
Three votes 2) Specify it as weak-signal digital
Zero votes 3) Leave it off the band plan

Option 1 has it.

Aug. 20 1997

NCPA coordination

Up to now, the NCPA has allocated frequencies for specific uses and stepped back while the individual packet special interests groups coordinated themselves on those frequencies allocated to their activity.

It has been suggested (more than once) on this remailer that the NCPA should/must get into the digital coordinating business. Eric and Gary have discussed this privately and have come to a consensus that the NCPA will have to do some digital coordination--especially in the 219 MHz sub-band.

Discussion followed.

Bob Meyer proposes: Shall the NCPA do digital coordination to some extent, details to be figured out later.

- Three in favor
- Four against
- One abstained

The motion fails.

Aug. 26 1997

W9HGI reports AMSAT wants to keep MIR on 145.80 and move APRS to 144.39 MHz from 145.79, (around here, 145.79 is allocated for

BBS). When they picked this frequency, they coordinated with Europe, but not the rest of the world... now we are asked by AMSAT to move everyone off "their frequency."

KO6RI: proposal that NCPA delete 145.79 from the band plan to make room for AMSAT.

Since this has been a BBS frequency for a long time, first we need to get the reaction of the PSNC the current users of 145.79.

Discussion followed.

Aug 28, 1997

Discussion on NCPA doing coordination. It was noted that coordination is mentioned in the bylaws.

Bill Choisser, who drafted the original bylaws, mentions a few things. Coordination is one of the things the NCPA does, but can decide to let others (special interests groups) do that without giving up anything (right to later decide to coordinate). The special interest groups were originally considered part of the NCPA, like members of a club.

Aug 31, 1997

KO6RI notes the PSNC currently calls the shots on "BBS" frequencies and would like to see some way of sharing those channels with other networks. Discussion followed.

Discussion on channels and boundaries for six meter sub-bands

Sept. 9, 1997

WB6YRU proposes: Should the NCPA adopt the follow channel scheme for these two six meter sub-bands?

- 50.60 (possible RTTY)
- 50.62 (possible calling, perhaps keyboard?)
- 50.64
- 50.66
- 50.68
- 50.70
- 50.72
- 50.74
- 50.76
- 50.78
- 50.80
- 51.62
- 51.64
- 51.66
- 51.68

The vote is on the channels, specific usage on specific channels can come later. For now, each channel can be "non-specific" pending further review.

- Seven vote YES
- One votes NO

The proposal passes.

Sept. 21 1997

WB9LOZ brings up the topic of internet forwarding resulting in the reduction of amateur (RF) links. Discussion follows.

Sept. 25 1997

Discussion of NARCC's coordination data being secret.

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Temporary Newsletter Editor:
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Newsletter Editor Elect:
Larry Eker WA0YQM

Frequency Coordinator:
Eric Williams, WD6CMU

Education Coordinator:
Larry Kenney, WB9LOZ

EOF

What is NCPA?

NCPA, the Northern California Packet Association, is an organization formed to foster the Digital Communications modes of Amateur Radio. So far, we have defined our goals as:

- **Education**
- **Coordination**

Education means making information available about various Digital modes, and this newsletter is but one part of that education process.

Coordination activities include frequency coordination (NCPA is recognized by NARCC as the official packet radio frequency coordinator) as well as coordinating people and their various uses of packet radio, be they DX Cluster, BBS, TCP/IP, keyboard-to-keyboard, NET/ROM, Traffic/NTS, Emergency uses of packet, or even experimenting with new frontiers of various digital modes.

We in NCPA believe that the next revolution in Ham Radio will come about in digital communications technology and in the beneficial coordination among all users of ham Digital Communications Technologies.

NCPA *Downlink*

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